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EXAMINER	
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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/049,629
Filing Date: February 22, 2002
Appellant(s): MORITA ET AL.

Mr. Thomas E. Brown
Registration No. 44,450
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 02 August 2004.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Invention

The summary of invention contained in the brief is correct.

(6) Issues

The appellant's statement of the issues in the brief is correct.

(7) Grouping of Claims

Appellant's brief includes a statement that claims 1-3 stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

6,496,751	SALVO et al.	12-2002
6,445,959	POTH	9-2002

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-3 rejected under 35 U.S.C. 103(a) as being unpatentable over Salvo et al. (USPN 6,496,751 B1) in view of Poth (USPN 6,445,959 B1).

The limitations of claim 1 and the relevant citations in Salvo et al. are as follows:

1. A machining assisting system comprising: a plurality of machine tools (a variety of example tools are recited at column 2, line 47-column 3, line 24, as well as a multiple tool system at column 4, lines 44-55) each including program improving (column 6, lines 15-36) and updating means (column 13, lines 19-32) that are connected to a central manager via a network; actual machining performance information is supplied to the central manager from the respective machine tools

(column 11, line 52-column 12, line 39); the central manager generates a database on the basis of the collected actual machining performance information and stores the database therein (column 15, lines 36-56); and the machine tools are each permitted to retrieve information necessary for machining from the database (column 13, lines 6-18).

The Salvo et al. reference discloses a process updating and enhancing means local to the tool (e.g. the operator control unit) at column 2, lines 47-65 and column 13, lines 6-31. However, Salvo et al. does not specifically recite that the machine tools are NC tools, not do they teach that the program generated is an NC program.

Poth, analogous to Salvo et al. in that they are both manufacturing tool control systems (Poth, column 1, lines 4-10), discloses that numerical control systems controlled by generated programs were well known in the art at the time the invention was made. (Poth, column 1, lines 10-52).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement Salvo's disclosed machine assisting system using the well known numerical control teaching because the modification would have provided a flexible and efficient system with the ability to accurately control the positioning and processing aspects of a machine that would be repeatable for each workpiece (Poth, column 1, lines 4-34).

Additionally, Poth teaches connecting NC machine tools via a network. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have connected the combined NC controllers and the central manager in

the combined system of Salvo et al. and Poth via a network because this would provide a more sophisticated system for the downloading of information to the NC controller over older tape or floppy disk methods (Poth, column 1, lines 35-52).

Claim 2 recites elements corresponding to the requirements of claim 1 with the additional requirement of the performance information being available to an apparatus "other than the NC machine tools". Salvo et al. reads on this requirement at column 14, lines 11-37.

Claim 3 is read in Salvo et al. as follows:

3. An NC machining assisting system as set forth in claim 1 or 2, further comprising the actual machining performance information includes at least one of workpiece information, tool information, cutting condition information, jig information, machine specification information, machining history information, machine operation history information, tool use history information and jig use history information (These requirements are generally read at column 8, lines 17-29 with a specific recitation of product quality at column 11, line 52-column 12, line 11).

(11) Response to Argument

The applicant's primary argument focuses on the singularity of the example system in the Salvo et al. reference. The applicant argues of page 6, paragraph 4 of the appeal brief: "Instead Salvo is only concerned with monitoring the process variables of a single process machine 10, not a plurality of NC machine tools." This argument is not persuasive over the totality of the Salvo et al. disclosure. Salvo et al. uses the single process tool only in an exemplary fashion: "The following description of the process

management system will refer to an extruder, however, this machine is merely exemplary and is not meant to limit the invention in any way." (column 3, lines 2-5). Salvo discloses the use of other process machines, such as an injection molding machine, roll former, and other manufacturing systems. In addition, "The process machine **10** is schematically illustrated as one extruder, however, the process machine, as embodied by the invention, may comprises (sic) one or more process machines." (column 4, lines 44-55). Therefore, Salvo et al. clearly discloses the plural machine tools of claim 1.

The applicant also asserts that Salvo fails to disclose the numerical control feature of claim 1. However, as pointed out in the rejection, these elements are found in the secondary reference to Poth. The examiner has clearly demonstrated why it would have been obvious to combine the aspects of these two systems. The applicant has not provided any reasoning as to why it would not have been obvious to combine the teaching of Salvo et al. and Poth in the manner set forth in the rejection. Therefore the rejection is proper.

The applicant further argues that Salvo fails to disclose that actual machining performance of a plurality of process machines is provided to a central manager. The examiner relies on Salvo et al. column 15, lines 35-44, wherein it states that process variable information can be stored by the process management system. This variable information includes machine performance information that is read in Salvo et al. at column 11, line 29-column 12, line 11. A user may request production information to be reviewed for trends such as by quality tools or for process variation. The applicant

again centers their argument on the fact that only a single machine is recited. However, as pointed out previously, this single machine is clearly intended by Salvo et al. to be a non-limiting example. Given that Salvo et al. discloses multiple machine systems, applicant's argument regarding the plurality of process machines storing data is not persuasive.

The examiner has properly considered the appellant's argument that the control unit **40** or any other control unit in Salvo fails to generate a database on the basis on collected machine process variables received from a plurality of process machines, with emphasis added to the plurality of process machines. As pointed out in the rejection, the combination of Salvo et al. and Poth makes obvious the system of claim 1 in view of the explicit teachings in both references, particularly since the Salvo et al. system discloses both singular and multiple machine systems.

The applicant argues further that the examiner mischaracterizes the teaching of Salvo because Salvo does not disclose that a machine process **10** analyzes process data in order to improve the process. The examiner respectfully disagrees. The examiner maintains that the functionality of the "machine operator control unit", wherein it includes software for data acquisition and data mining and data analysis, discloses the features of claim 1. Column 13, lines 19-31 of Salvo et al. additionally recites further support for this contention: "The transfer functions enable individual features, such as, but not limited to, machines, of the process management system to evaluate and analyze process variables so as to enhance process variables during the operation of the process machine."

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Elliot Frank
Examiner
Art Unit 2125

ELF
September 28, 2004

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